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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/742,031	05/07/2010	Albert Veninger	PA0003692U-U73.12-425KL	1469

12208 7590 01/23/2017
Kinney & Lange, P.A.
312 South Third Street
Minneapolis, MN 55415

EXAMINER

NGUYEN, ANDREW H

ART UNIT	PAPER NUMBER
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3741

NOTIFICATION DATE	DELIVERY MODE
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01/23/2017

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALBERT VENINGER, JEFFREY MELMAN,
CHRISTINE BLANCHARD, and BARRY SCHLEIN

Appeal 2015-003176
Application 12/742,031
Technology Center 3700

Before STEFAN STAICOVICI, JAMES P. CALVE, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Albert Veninger et al. (“Appellants”) appeal under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1–12 and 21.¹ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and enter a NEW GROUND OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

¹ Appellants submit the real party in interest is United Technologies Corporation. Appeal Br. 2.

THE CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A gas turbine engine having reduced emissions comprising:
 - a compressor for providing pressurized air; and
 - a combustion chamber having:
 - an inner liner defining a combustion zone for burning a mixture of fuel and a first portion of the pressurized air, said liner having a wall with a hot side facing the combustion zone and an oppositely faced cold side;
 - a shroud affixed to said inner liner and circumscribing a portion of said inner liner, said shroud spaced from said cold side and forming an annulus there between for accepting only a second portion of the pressurized air therein, and wherein at operating temperatures said shroud permits flow of the second portion of the pressurized air in the annulus without entering the combustion zone; and
 - a plurality of heat transfer features disposed on said cold side of said inner liner wall for exchanging heat from said wall to the second portion of the pressurized air.

REJECTIONS²

- 1) Claims 1, 7, and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over Glezer (US 2005/0044857 A1, published Mar. 3, 2005) in view of Huth (US 8,245,513 B2, issued Aug. 21, 2012), or alternatively, in view of Abreu (US 6,314,716 B1, issued Nov. 13, 2001) and Baudoin (US 2004/0011058 A1, published Jan. 22, 2004).

² In the Answer, the Examiner withdrew the rejection of claims 1–6 and 21 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Ans. 2.

- 2) Claims 2–4 and 8–10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Glezer in view of Huth, or alternatively, in view of Abreu, Baudoin, and Nakae (US 2005/0047932 A1, published Mar. 3, 2005).
- 3) Claims 5 and 11 are rejected under 35 U.S.C. § 103(a) as unpatentable over Glezer in view of Huth, or alternatively, in view of Abreu, Baudoin, and Parker (US 2007/0256417 A1, published Nov. 8, 2007) or Green (US 7,007,482 B2, issued Mar. 7, 2006).
- 4) Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as unpatentable over Glezer in view of Huth, or alternatively, in view of Abreu, Baudoin, and Pidcock (US 7,000,397 B2, issued Feb. 21, 2006).

DISCUSSION

Rejection 1

Appellants argue the rejection of claims 1 and 7 together. Appeal Br. 4. We select claim 1 as representative and claim 7 stands or falls with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Glezer in view of Huth

The Examiner finds that Glezer discloses all the limitations of independent claims 1 and 7 with the exception of “the second portion of air not entering the combustion zone” due to unlabeled “holes near the downstream end of the liner underneath numeral 50.” Final Act. 4; *see* Glezer Fig. 2. The Examiner further finds that Huth discloses “combustor liners may be made without openings such that the cooling flow around the liner may flow the length of the combustor liner without entering the

combustion chamber.” *Id.* (citing Huth, col. 12, ll. 4–7.). The Examiner concludes that it would have been obvious “to make Glezer’s liner without holes in order to allow cooling across the entire length of the combustor liner, as taught by Huth.” *Id.*

Appellants contend that Huth discloses that its cooling air is directed **“to a burner for combustion in the burner upon exiting the inner space.”** Appeal Br. 5 (citing Huth, col. 11, l. 63 – col. 12, l. 9.). Appellants also contend that other portions of Huth “support the fact that Huth does not teach or suggest modifying a combustor liner to prevent cooling flow from entering the combustion chamber.” *Id.* (citing Huth, col. 4, ll. 56–64). The Examiner responds that the combination of Glezer and Huth “simply modifies Glezer’s combustor liner such that it does not comprise any holes which inject air into the combustion chamber, as was well known in the art, as taught by Huth.” Ans. 2.

Glezer discloses a “gas turbine engine 10 . . . having a compressor 12, a combustor 14 . . . in fluid communication with the compressor 12.” Glezer, ¶ 14, Fig. 1. Combustor 14 “has a combustion zone **18** and a first liner **22** bounding the combustion zone **18**.” *Id.* ¶ 15. Combustor 14 “also has a first convector **30** spaced apart from the first liner **22**.” *Id.* ¶ 15, Fig. 2. Glezer discloses cooling device 62 “formed by the first surface of liner **22**.” *Id.* ¶ 21. A “defined volume **38** is disposed between the first liner **22** and the first convector **30**.” *Id.* ¶ 16, Fig. 2. “[F]irst end portion **40** and the second end portion **42** of the defined volume **38** may be open or closed.” *Id.* ¶ 17, Fig. 2.

The Examiner does not direct us to any disclosure in Glezer’s specification of holes in first liner 22 illustrated under reference numeral 50

as referred to by the Examiner in the rejection of claims 1 and 7. Final Act. 4. We are unable to discern from an examination of Glezer's Figure 2 or the other drawings that any holes are present in first liner 22. When we review the disclosure of drawings in a prior art reference, we should "evaluate and apply the teachings . . . on the basis of what they reasonably disclose and suggest to one of ordinary skill in the art." *In re Aslanian*, 590, F.2d 911, 914 (CCPA 1979); *In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972). In this case, we determine that Figure 2 of Glezer would not reasonably disclose or suggest to one of ordinary skill in the art that holes are present in first liner 22. Based on this determination, there is no adequate reason with rational underpinnings to combine the teachings of Glezer with Huth. In the absence of holes in first liner 22, cooling air flowing in volume 38 between open end portions 40 and 42 will not enter Glezer's combustion zone 18. Therefore, we find that Glezer anticipates claim 1 under 35 U.S.C. § 102(b) because it discloses all of the limitations of claim 1. We, thus, sustain the Examiner's rejection of claim 1, and claim 7, which falls with claim 1. However, because our analysis differs from the Examiner's, we designate our affirmance as a new ground of rejection under 35 C.F.R. § 41.50(b) to provide Appellants with a fair opportunity to respond.

Claim 21 depends from claim 1. Claims App. 4. Appellants did not argue separately for the patentability of claim 21. Appeal Br. 13. We thus sustain the rejection of claim 21 but designate our affirmance as a new ground of rejection under 35 C.F.R. § 41.50(b) for the reasons stated in connection with claim 1.

Glezer in view of Abreu and Baudoin

The Examiner alternatively turned to Abreu and Baudoin to interpret Glezer as including a dilution zone downstream of combustion zone 18 and to conclude that Glezer's unlabeled holes allow cooling air to flow into the dilution zone rather than the combustion zone. Final Act. 4–5. In light of our determination stated above that Glezer anticipates claims 1 and 7, we do not decide this alternative rejection of claims 1 and 7. 37 C.F.R. § 41.50 (a)(1).

Rejections 2, 3, and 4

Claims 2–6 depend ultimately from claim 1. Claims App. 2–3. Claims 8–12 depend ultimately from claim 7. *Id.* at 3–4. Appellants did not argue separately for the patentability of claims 2–6 and 8–12. Appeal Br. 13. We sustain the rejections of claims 2–6 and 8–12 but designate our affirmance as a new ground of rejection under 35 C.F.R. § 41.50(b) for the reasons stated in connection with claims 1 and 7.

DECISION

The Examiner's decision rejecting claims 1–12 and 21 is affirmed with our affirmance being designated a new ground of rejection.

FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 41.50(b) also provides:

When the Board enters such a non-final decision, [Appellants], within two months from the date of the decision, must exercise one of the following two options with respect to the new ground[s] of rejection to avoid termination of the appeal as to the rejected claims:

- (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground[s] of rejection [are] binding upon the Examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground[s] of rejection designated in this decision. Should the examiner reject the claims, [Appellants] may again appeal to the Board pursuant to this subpart.
- (2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED; 37 C.F.R. § 41.50(b)